

### Abstract of the Disclosure

The present invention provides a disc type eccentric rotor having at least two air-core coils, the rotor comprising a flat type commutator member having a shaft insertion through hole in the center thereof, a plurality of commutator land segments formed around the shaft insertion through hole on a first side of the flat type commutator member, wound type air-core coil arrangement guides formed around the shaft insertion through hole on a second side of the flat type commutator member, air-core coil end portion connection lands formed circumferentially on the second side of the flat type commutator member, a shaft holder installed around the shaft insertion through hole on the second side of the flat type commutator member, and wound type air-core coils installed at the wound type air-core coil arrangement guides and having the end portions thereof connected to the air-core coil end portion connection lands. The air-core coils of bigger sizes are uniformly arranged on the commutator member, so that high efficiency and easy installation can be obtained. The arrangement of the air-core coils offsets the center of gravity from the geometrical centroid of the rotor, and there is no need for an additional eccentric member. Otherwise, since the printed wiring type air-core coil is thinner than the wound type air-core coil, an eccentric weight is installed on the printed wiring type air-core coil so that a great amount of vibration may be obtained during rotation of the rotor.